Editorial

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Welcome to V 15 N4 issue. This issue has four papers. The first paper is 'Intelligent shelf system based on a support vector machine-neural network location algorithm' by Qi Lu and Hesheng Zhang. According to these authors, the demand for location information is crucial with the rapid development of the internet of things and the rapid popularisation of various types of intelligent hardware devices. They argue that the application of intelligent shelves in integrated circuit foundry enterprises can realise automatic inventory, which can improve the accuracy and real-time performance of data in and out of the warehouse.

This paper takes an active tag location system as the research object, extensively analyses the current research status and development direction of the existing radio frequency identification location technology, proposes an active tag location method based on a support vector machine-neural network, and constructs a complete set of experimental verification platforms. Further, empirical studies are needed to verify the results.

The second paper is 'Managing changes to XML schema design styles in a temporal and multi-version XML environment' by Zouhaier Brahmia, Fabio Grandi and Rafik Bouaziz. The authors argue that changing the design style of an XML schema is not only a matter of code presentation (i.e., impacting on how the definition of its components is organised) but it may also involve changes to its specification (i.e., impacting on how its components are actually defined). Current research has focused on changes to traditional aspects of XML schemas like element/attribute declarations and simple/complex type definitions. However, advanced aspects of XML schemas have been either considered only to a limited extent, like XML namespaces or not studied at all, like XML schema design styles.

In this paper, they propose an approach for changing the design styles of a conventional XML schema in the temporal and multi-version τXSchema framework which allows the XDBA to specify changes to the conventional schema design style. It also automatically propagates, when necessary, the possible effects of these changes, concerning the specifications of the involved conventional schema version, to the conventional document version(s) that are connected to the modified schema version and annotation document. An illustrative example has also been provided to help the reader appreciate how conventional schemas can be versioned in τXSchema when their design styles evolve over time (involving element/attribute renaming or not). Further studies are needed to verify the approach.

The third paper is, 'A distributed architecture for large scale news and social media processing' by Iraklis Varlamis, Dimitrios Michail, Pavlos Polydoras and Panagiotis Tsantilas. According to these authors, when designing a data processing and analytics pipeline for data streams, it is important to provide the data load and be able to successfully balance it over the available resources. This can be achieved easily, if small processing modules, which require limited resources, replace large monolithic processing software, to have a system architecture and a processing pipeline that allows this. The development of a large-scale news and social media processing platform requires the integration of high accuracy components that efficiently collaborate in order to locate and extract useful information.

In this paper, the authors have developed a social media and news analytics platform, called Palo analytics, which performs a series of content aggregation, information extraction (e.g., NER, sentiment tagging, etc.) and visualisation tasks to a large amount of data, daily. They demonstrated the architecture of the platform that relies on micro-modules and message-oriented middleware for delivering distributed content processing. Early results show that the proposed architecture can easily stand the increased content load that occasionally occurs in social media (e.g., when a major event takes place) and quickly release unused resources when the content load reaches its normal flow. However, there is still room needed for improvement, especially in the accuracy of the various modules and the expansion of the pipeline with more and more sophisticated micro-services. It would be good to improve the crawler throughput and reduce the cycle of visiting the list of all monitored sources and checking for updates.

The fourth paper is 'A language model-based approach for candidates with PhD profiling in a recruiting setting' by Stefania Marrara, Antonia Azzini and Nicola Cortesi. The authors in this paper present a tool aimed at supporting recruiters in the selection and hiring of candidates with PhD. The reason for the development given by these authors is that students facing a PhD course in Europe have difficulties in getting a permanent position in the academy. The situation becomes worse when graduated PhDs must migrate to public/private organisations that are always ready to understand and improve the research experience.

This paper presents a new support system for recruiters in the selection and hiring of candidates with PhD. In this paper, a language model-based approach is adopted to compute the vector of soft skills that composes a job seeker profile. The vector is the output obtained by extracting the soft skills from a textual self-description. A full architecture of the find your doctor (FYD) job candidates profile evaluation and job matching system is presented. According to these authors, the system has no claim to be an oracle able to replace human sensitivity and ability to recognise and evaluate a candidate's soft skills. Instead, the objective is to support the recruiters by avoiding a long and often fruitless search in a dataset containing many candidates. These authors argue that the results show the FYD recommender achieves a quite good precision in finding a good match between candidate and job offer and it is appreciated by the FYD recruiters as a support tool in their recruitment activity. However, the data sample is very small, and more datasets are required to better test the hypothesis of creating a good supporting tool.